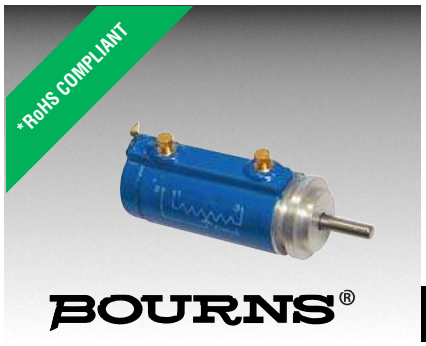


BOURNS®

Features

- Servo mount
- Excellent resolution
- Non-standard features and specifications available
- Small diameter
- High rotational life
- RoHS compliant*

3750/3751 - Precision Potentiometer

Electrical Characteristics[1]	3750 Wirewound Element	3751 Hybritron® Element
Standard Resistance Range	100 to 100 K ohms	1 K to 100 K ohms
Total Resistance Tolerance	±5 %	±10 %
Independent Linearity	±0.25 %	±0.25 %
Effective Electrical Angle	3600 ° +10 °, -0 °	3600 ° +10 °, -4 °
Absolute Minimum Resistance/ Minimum Voltage	1 ohm or 0.1 % maximum (whichever is greater)	Minimum voltage 0.2 % maximum
Noise	500 ohms ENR maximum	Output smoothness 0.15 % maximum
Dielectric Withstanding Voltage (MIL-STD-202, Method 301)		
Sea Level	1,000 VAC minimum	1,000 VAC minimum
Power Rating (Voltage Limited By Power Dissipation or 315 VAC, Whichever Is Less)		
+70 °C	1 watt	1 watt
+125 °C	0 watt	0 watt
Insulation Resistance (500 VDC)	1,000 megohms minimum	1,000 megohms minimum
Resolution	See recommended part nos.	Essentially infinite

Environmental Characteristics[1]		
Operating Temperature Range	+1 °C to +125 °C	+1 °C to +105 °C
Storage Temperature Range	-65 °C to +125 °C	-55 °C to +105 °C
Temperature Coefficient Over Storage Temperature Range[2]	±50 ppm/°C maximum/unit	±100 ppm/°C maximum/unit
Vibration	20 G	20 G
Wiper Bounce	0.1 millisecond maximum	0.1 millisecond maximum
Shock	100 G	100 G
Wiper Bounce	0.1 millisecond maximum	0.1 millisecond maximum
Load Life	1,000 hours, 1 watt	1,000 hours, 1 watt
Total Resistance Shift	±2 % maximum	±5 % maximum
Rotational Life (No Load)	1,000,000 shaft revolutions[2]	10,000,000 shaft revolutions[2]
Total Resistance Shift	±5 % maximum	±5 % maximum
Moisture Resistance (MIL-STD-202, Method 103, Condition B)		
Total Resistance Shift	±2 % maximum	±5 % maximum
IP Rating	IP 40	IP 40

Mechanical Characteristics[1]	
Stop Strength	14 N-cm (20 oz-in.) minimum
Mechanical Angle	3600 ° +20 °, -0 °
Torque	
Starting	0.35 N-cm (0.5 oz.-in.) max.
Running	0.21 N-cm (0.3 oz.-in.) max.
Shaft Runout	0.08 mm (0.003 in.) T.I.R.
Lateral Runout	0.08 mm (0.003 in.) T.I.R.
Shaft End Play	0.13 mm (0.005 in.) T.I.R.
Shaft Radial Play	0.05 mm (0.002 in.) T.I.R.
Pilot Diameter Runout	0.05 mm (0.002 in.) T.I.R.
Backlash	1.0 ° maximum
Weight	Approximately 8.5 G
Terminals	Gold-plated turret lugs
Soldering Condition	
Manual Soldering	96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire 370 °C (700 °F) max. for 3 seconds
Wave Soldering	96.5Sn/3.0Ag/0.5Cu solder with no-clean flux 260 °C (500 °F) max. for 5 seconds
Wash processes	Not recommended
Marking	Manufacturer's name and part number, resistance value and tolerance, linearity tolerance, wiring diagram, and date code
Ganging (Multiple Section Pots.)	1 cup maximum

[1]At room ambient: +25 °C nominal and 50 % relative humidity nominal, except as noted.
[2]Consult manufacturer for complete specification details.

Recommended Part Numbers

Part Number	Resistance (Ω)	Resolution
3750S-1-102L	**1,000**	**0.05**
3750S-1-202L	**2,000**	**0.04**
3750S-1-502L	**5,000**	**0.04**
3750S-1-103L	**10,000**	**0.02**

BOLDFACE LISTINGS ARE IN STOCK AND READILY AVAILABLE THROUGH DISTRIBUTION.

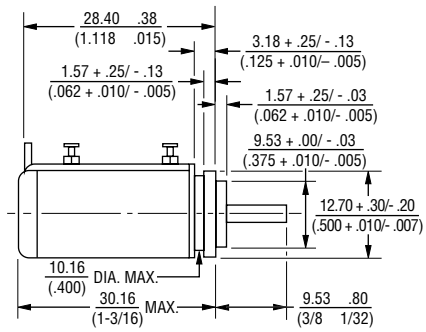
FOR OTHER OPTIONS CONSULT FACTORY.

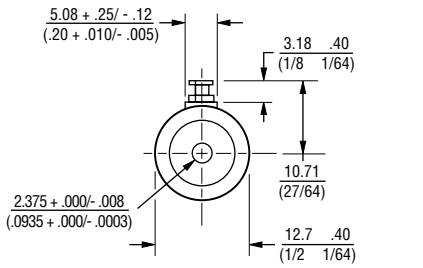
Part Number	Resistance (Ω)
3751H-1-102L	**1,000**
3751H-1-202L	**2,000**
3751H-1-502L	**5,000**
3751H-1-103L	**10,000**

ROHS IDENTIFIER:
L = COMPLIANT*

Product Dimensions

3750/3751



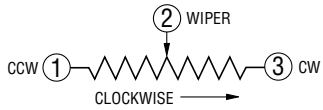


TOLERANCES: EXCEPT WHERE NOTED

DECIMALS: .XX .25 (.010) .XXX .13 (.005)

DIMENSIONS: MM (IN)

FRACTIONS: 1/64



REV. 06/12

"Hybritron" is a registered trademark of Bourns, Inc.

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications.